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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MAIS, MARK A	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/834,771	PERLMAN ET AL.	
	Examiner	Art Unit	
	Mark A. Mais	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 20, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saleh et al. (US Patent Publication 201/0033548).

4. With regard to claims 1, 10 and 19, Saleh et al. discloses an apparatus, and computer readable storage medium that employ a flooding protocol to send data packets between a source and a destination, the method comprising:

receiving a data packet at an intermediate node **[Fig. 14, nodes 0-8]** located between the source and the destination wherein the data packet is enroute from the source to the destination **[Fig. 14, nodes A and B]**;

wherein the data packet is received from a first neighboring node **[for example, neighbors exchange hello messages which contain link state advertisements (LSAs) (which also contain the hop_count), page 6, paragraphs 0076-0077]**;

determining whether the data packet has been seen before at the intermediate node **[checking link state ID (LSID) of the LSA, page 8, paragraph 0091]** ; and

if the data packet has not been seen before, forwarding the data packet to neighboring nodes of the intermediate node **[LSA is added to the LSAawaitingToBeSent list (fig. 5, step 550) when the packet has not been seen before, page 8, paragraph 0097]**.

5. It is inherent that all packets contain data. However, Applicant has intended a special meaning to be accorded to a data packet [a "normal" data packet which is, apparently, distinguished from a hello packet]. Saleh et al. may not specifically disclose using data packets. However, Saleh et al. does disclose a router that sends and receives hello packets. Specifically, Saleh et al. functionally determines the physical path and corresponding nodes between the source and destination in order to establish a virtual path **[see Abstract]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used "normal" packets instead of the hello packets in a flooding protocol in order to ensure that packets are sent from a source and received at a correct destination because that is how a packet network operates with routers which use a flooding protocol.

6. With regard to claims 2, 11, and 20, Saleh et al. discloses that forwarding the data packet to neighboring nodes involves forwarding the data packet to all neighboring nodes except the first

neighboring node from which the data packet was received **[the LSA is sent to all neighbors except the neighbor from which it received the LSA, page 8, paragraph 0097]**.

7. With regard to claims 3, 5, 6, 12, 14, 15, 23, 24 Saleh et al. discloses examining a sequence number, S_R, contained within the data packet to determine whether the sequence number has been seen before and comparing it to the highest received sequence number S_H stored at the node based on the source and destination of the data packet **[the new LSA (which includes information about the ID of the originating node as well as the intermediate nodes, see fig. 18) is compared to the current LSA and either discarded if seen before or overwritten if not seen before, page 8, paragraph 0099.]**.

8. With regard to claims 4, 13, and 22, Saleh et al. discloses the sequence number includes one of : a sequence number inserted into a payload of the data packet; a sequence number located within an Internet Protocol (IP) header of the data packet; and a sequence number located within a layer 4 header of the data packet **[fig. 17, hello protocol header contains LSID field 1830, neighbor node ID 1845 and link ID 1850, page 19, paragraph 0235; *see also* fig. 16, protocol header which includes a sequence number 1660, origin ID 1670, and target node ID 1680, page 17, paragraph 0229]**.

9. With regard to claims 7, 16, and 25 Saleh et al. discloses determining whether the data packet has been seen before involves examining a record, R **[link state database, page 8, paragraph 0099]**, indicating which of N possible sequence numbers **[interpreted by examiner as ANY**

possible number of sequence numbers, e.g., the LSID can be 32 bits, page 8, paragraph 0091] preceding a highest received sequence number, Su, have been seen before **[the nodes compare LSIDs, and when two LSIDs are compared, the node looks up the current LSA in the database, and then compares the LSAs to see which one is more recent, page 9, paragraph 0099. The LSID FIRST_LSID takes precedence, page 8, paragraph 0100; *see also* page 11, paragraph 0134 and page 14, paragraphs 0172, wherein Saleh et al. discloses that if a VP goes down, it must re-establish each VP by sending a Restore Path Request (RPR) message (page 11, paragraph 0134). When processing the restore path request entry (RPRE) that is received, the RPR sequence number is analyzed whether it falls between the FirstSequenceNumber and the LastSequenceNumber or is considered invalid (page 14, paragraph 0172)]**.

10. With regard to claims 8, 9, 17, 18, 26 and 27, Saleh et al. discloses that determining whether the data packet has been seen before involves: looking up a highest received sequence number, S_H;

if $S_R > S_H$, overwriting S_H with S_R, updating a record, R, **[link state database, page 8, paragraph 0099, the LSID can be 32 bits, page 8, paragraph 091]**, indicating which of N possible sequence numbers **[interpreted by examiner as ANY possible number of sequence numbers, e.g., the LSID can be 32 bits, page 8, paragraph 0091]** preceding S_H have been seen before, and forwarding the packet to the neighboring nodes **[the received LSA LSID is compared to the LSID of the current LSA in the database, and the most recent one is**

installed in the database, page 8, paragraph 0099; then the LSA is added to the LSAawaitingToBeSent list (fig. 5, step 550), page 8, paragraph 0097];

if S_H -N > S_R, discarding the data packet **[if the LDS ID of the LSA in the database is more recent, the received LSA is discarded, page 8, paragraph 0099]**, and

if S_H > = S_R >= S_H -N, then if R indicates that S_R has been seen before, discarding the data packet **[if the LSID of the LSA in the database is more recent, the received LSA is discarded, page 8, paragraph 0099]**, and if R indicates the data packet has not been seen before, updating R to indicate that S_R has been seen, and forwarding the data packet to the neighboring nodes **[if the LSID of the two packets are the same (S_H = S_R), the HOP_COUNTS are compared, if the new packet has a lower hop count, the most recent one is installed in the database; page 8, paragraph 0100; then the LSA is added to the LSAawaitingToBeSent list (fig. 5, step 550), page 8, paragraph 0097]**.

Response to Arguments

11. Applicant's arguments filed July 20, 2005 have been fully considered but they are not persuasive.

12. Applicant argues that Saleh et al. exchanges only hello packets and that Applicant's invention exchanges "normal" data packets **[Applicant's Amendment After Final dated July 20, 2005, pages 10-11]**. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant

relies (i.e., forwarding only "normal data packets" and not forwarding "special hello packets") are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Moreover, as explained for claims 1, 10, and 19 above, Saleh et al. forwards packets enroute from the source to the destination **[see Saleh et al., Fig. 14, nodes A and B]**.

13. The use of packets as data in a packet network is inherent because all packets contain data [even null data]. Examiner interprets Applicant's arguments as stating that the recitation of data packets in the claims as a negative limitation excluding hello packets. As discussed above, Applicant has intended a special meaning to be accorded to a data packet [a "normal" data packet which is, apparently, distinguished from a "hello packet"]. For efficient and precise claim interpretation, Applicant must claim the exclusion of the "hello packets" to be afforded the benefit of such an exclusion [However, Applicant's specification does not appear to support the exclusion of only "hello packets"].

14. As discussed in paragraph 5 above, Saleh et al. may not specifically disclose using data packets. Applicant further argues that the use of data packets precludes the use of messaging between routers **[Applicant's Amendment After Final dated July 20, 2005, page 10]**. However, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., no need for inter-router messaging in order to forward only "normal data packets" but not "hello packets")

are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 5, 2005